

ABSTRACT OF THE DISCLOSURE

When a shift routine is not being executed in an automatic transmission and a difference between an actual turbine speed and a calculated synchronous speed is equal to, or greater than, a preset value α , a difference ΔNT between an estimated turbine speed and the actual speed when the automatic transmission is in a neutral state is calculated. When ΔNT is equal to, or less than, a preset value β , it is determined that a failure related to the neutral state of the automatic transmission has occurred. Also, when ΔNT is greater than a preset value β , it is determined that a failure related to slipping of a frictional engaging element has occurred.